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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,823	09/22/2006	Colin Brown	102790-210 (30088 US)	4910
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EXAMINER CONLEY, SEAN EVERETT				
ART UNIT		PAPER NUMBER		
1797				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/572,823

Applicant(s)

BROWN ET AL.

Examiner

SEAN E. CONLEY

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed April 24, 2009 has been received and considered for examination. Claims 1-4 and 6-7 are pending. The previous rejection of claims 1-4 and 6 under 35 U.S.C. 112, 2nd paragraph is withdrawn in response to the amendment of claim 1 submitted April 24, 2009.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimacopoulos (U.S. Patent No. 4,173,604) in view of Fritz et al. (U.S. Patent No. 5,342,584).

Regarding claims 1 and 7, Dimacopoulos discloses a method of disseminating into an atmosphere a volatile liquid using a device. The device (10) is adapted to disseminate vaporous material into an atmosphere and comprises the following elements: (a) a housing (12) comprising a plurality of parallel slots (16) serving as an exit port (see figure 1); (b) an electrically-driven fan (20) having an axis arranged perpendicularly in the housing and having fan blades arranged perpendicular to the axis (see figure 2), so that the fan blows a current of air horizontally across the interior of the

housing and through exit ports (16) into the atmosphere (see figures 1-2; see col. 4, lines 35-60); (c) a reservoir (28) of volatile liquid (48) for evaporation into the atmosphere, the reservoir (28) having an upper orifice substantially completely blocked by an essentially planar, essentially horizontal evaporation surface (surface of absorbent member 38) extending across substantially the entire interior of the housing, the reservoir (28) and the housing (12) cooperating such that the current of air blows across the evaporation surface (surface of absorbent member 38) as it moves towards the exit port (16 (see figures 4-5; see col. 5, lines 10- 55)); and (d) a wick (liquid transport means (50)) disposed centrally in the reservoir and extending from the bottom of the reservoir to the evaporation surface for transferring liquid from the reservoir (28) to the evaporation surface (see figures 4-5; see col. 5, line 10 to col. 6, line 65). However, Dimacopoulos does not appear to disclose that the plane of rotation of the fan is perpendicular to the plane of the planar evaporation surface, the fan being mounted such that the fan blows a current of air across the evaporation surface.

Fritz et al. discloses an air freshener device for dispensing a volatile fragrance from a cartridge in the housing using a fan (82) (see figures 1-5; see col. 2, line 50 to col. 3, line 12; see col. 3, line 60 to col. 4, line 32; see col. 7, line 10 to col. 8, line 11). More specifically, the fan (82) of Fritz et al. has a plane of rotation that is perpendicular to the plane of the planar evaporation surface (diffuser 35), with the fan (82) being mounted such that the fan blows a current of air across the evaporation surface (35) (see col. 7, line 57 to col. 8, line 11; see col. 4, lines 24-30; see figures 3-4).

Therefore, since both Dimacopoulos and Fritz et al. disclose devices for blowing a stream of air across a planar evaporation surface to disseminate vapors into the atmosphere, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the location of one fan for the other, in order to yield the predictable result of generating an air stream containing an evaporated fragrance to freshen the surrounding atmosphere.

Regarding claim 2, Dimacopoulos discloses an evaporation surface (surface of member 38 completely saturated with the vapor generating liquid 48) that is located beneath the flow of the air current which is generated by fan (20) (see col. 6, lines 49-68; see figures 2, 4 and 5).

Regarding claim 3, Dimacopoulos discloses an evaporation surface (capillary action membrane 38) which is formed from a non-woven fabric. Since the evaporation surface is made of a non-woven fabric, it inherently contains a series of very small wavelike surface contours which are also known as undulations (see col. 5, lines 43-45).

4. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimacopoulos in view of Fritz et al. as applied to claim 1 above, and further in view of Purzycki (U.S. Patent No. 4,913,350)

The combination of Dimacopoulos and Fritz et al. discloses the claimed invention but is silent with regards to at least one flat vane raised on the planar surface essentially perpendicular to the surface.

Purzycki discloses an improved external capillary member for releasing a fragrance (see figures 1-4; see col. 2, lines 34-58; see columns 3-4). The surface of the capillary member has been provided with capillary cavities as illustrated in figures 1-4. The resulting fins or vanes formed on the capillary member results in a fragrance being released uniformly and linearly into the air, without distortion of the odor character and without change in the rate of delivery (see col. 2, lines 34-58 and col. 1, lines 16-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Dimacopoulos and incorporate the capillary design of the fins exemplified in figure 3a of Purzycki onto the surface of the capillary action membrane (38) in order to release the fragrance uniformly and linearly in to the air, without distortion of the odor character and without change in the rate of delivery. The resulting capillary action membrane (38) would have a vane that extends across the surface in the direction of at least a portion of the air flow (due to the shape of the housing 12) and is capable of being adapted to be rotated (the membrane (38) has a circular circumference) such that at least one vane would be positioned parallel to a portion of the airflow, thus being able to block the flow.

Response to Arguments

5. Applicant's arguments with respect to claims 1-3 and 7 as being anticipated by Dimacopoulos have been considered but are moot in view of the new ground(s) of rejection. U.S. Patent No. 5,342,584 to Fritz et al. has been relied upon to teach the

newly added claim limitations recited in claim 1 pertaining to the location of the fan and the evaporation surface.

Furthermore, concerning the prior art reference of Dimacopoulos, the applicant argues the following: *"Applicant submits that the Examiner merely reads applicant's claims into the anticipatory reference, regardless of the reference's disclosure. More specifically, applicant claims "a housing comprising a plurality of parallel slots serving as an exit port". A "plurality of slots" means more than two slots. "Parallel slots" in this context would mean more than two slots arranged in a parallel fashion. Nowhere is such structure found in the reference Dimacopoulos. Instead, Dimacopoulos discloses two upper air inlet ports and two lower air outlet ports (see numerals 15 and 16 in Fig. 1, as well as the description in Col. 4, lines 33 and 34). This structure is not a plurality of slots."*

The Examiner respectfully disagrees. The phrase "a plurality of slots" does not mean more than two slots. It is well known and understood that the term "plural" means more than one. For example, see the dictionary definition of "plural" attached to this office action for the applicant's convenience. Therefore, Dimacopoulos does in fact teach a plurality of parallel slots (two outlet slots 16 arranged in parallel – see figure 1) as recited in claim 1.

6. Applicant's arguments filed April 24, 2009, with respect to the rejection of claims 4 and 6 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

The applicant argues the following: *"the Examiner admits that Dimacopoulos*

does not show "at least one flat vane raised on the planar surface essentially perpendicular to the surface" of the horizontal evaporation surface. Instead, the Examiner points to Purzycki for providing the missing disclosure. However, applicant submits that Dimacopoulos completely teaches away from a combination with Purzycki. Dimacopoulos discloses a can for the supply storage of the vapor generating material. Immediately beneath and parallel to the can lid 30 is an inner closure member 38 which serves as a dispensing diaphragm, the inner closure member 38 is exposed to the atmosphere upon removal of the removable lid portion 34 over the entire area circumscribed by the peripheral score 32. The inner closure member 38 is a capillary action membrane adapted to receive vapor generating liquid from another capillary action membrane in contact with a localized region and transport the vapor generating liquid by capillary action over its entire disc so as dispense vapors to the atmosphere from its entire exposed upper surface defined within peripheral score 32. The membrane may be blotting paper or non-woven fabric. A tiny hole 40 (0.020 inch to 0.050 in diameter to avoid spillage) is provided through the center of inner closure member 38 which serves as a pressure relief port to prevent buildup of vapor pressure in the head space between the inner closure member 38 and the vapor generating liquid in receptacle 28 under elevated temperature conditions. Such arrangement teaches away from combining the Purzucki reference with the Dimacopoulos reference. In order to fully utilize the capillarity capacity, Purzycki capillary members are freely held by the top housing portion. The capillary members do not reach the bottom of the housing. Combining such capillary member with Dimacopoulos would not be feasible, because

the capillary members would not be stable in an opening through the thin blotter paper or non-woven fabric of Dimacopoulos. In addition, the length of the external portion of the capillary members would most likely interfere with the fan blades of Dimacopoulos. In addition, a person of skill in the art would not enlarge the flat evaporation membrane of Dimacopoulos which is optimal with the parallel fan arrangement and provide vertical surfaces protruding from the membrane to enhance the evaporation."

The applicant's argument is not persuasive. Dimacopoulos does not teach away from a combination with Purzycki as asserted by the applicant. The applicant specifically points to the teaching in Dimacopoulos of the arrangement between the pressure relief port (40), the inner closure member (38), and the vapor generating liquid in receptacle (28) for the basis of the teaching away from the combination with Purzycki. However, the argument is not supported by any factual evidence in either reference. It has been held that unsupported arguments are no substitute for objective evidence.

The applicant further argues the following: *"But even if the combination of references would be possible somehow, it would not provide applicant's invention, because claim 4 calls for at least one fiat vane raised on the planar surface which is essentially perpendicular to the surface and which extends across the surface in the direction of the air flow. Again, even if the combination was possible, the capillary member of Purzycki are not "flat" (they are long), nor are they "raised on the planar surface" (Purzycki shows the long capillary members protruding through the surface of the housing or when combined through the thin membrane) and further, they are not*

"perpendicular to the surface which extends across the surface in the direction of the air flow"."

The Examiner respectfully disagrees. The combination would provide at least one flat vane raised on the planar surface which is essentially perpendicular to the surface and which extends across the surface of the air flow. The Examiner has only relied on Purzycki for the teaching that the vanes extending from the capillary member, exemplified in figure 3a, improve the release the fragrance uniformly and linearly in to the air, without distortion of the odor character and without change in the rate of delivery. Thus, the resulting capillary action membrane (38) of Dimacopoulos would have a vane that extends across the surface in the direction of at least a portion of the air flow (due to the shape of the housing 12) and is capable of being adapted to be rotated (the membrane (38) has a circular circumference) such that at least one vane would be positioned parallel to a portion of the airflow, thus being able to block the flow.

The applicant further argues the following: *"In addition, concerning claim 6, the references do not make obvious a structure in which "in which at least one vane is adapted to be rotated from a position parallel to the gas flow to a flow-blocking position transverse to the flow."*

The Examiner disagrees. The vanes of the capillary members disclosed by Purzycki are capable of being rotated from a position parallel to the gas flow to a flow blocking position transverse to the flow because, as stated above, at least a portion of the air is reflected off of the walls of the housing 12 prior to exiting in the device of Dimacopoulos. Therefore, the combination is capable of functioning as claimed. Claims

4 and 6 remain rejected as being unpatentable over the combination of Dimacopoulos, Fritz et al., and Purzycki.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Conley whose telephone number is 571-272-8414. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 11, 2009

/Sean E Conley/
Primary Examiner, Art Unit 1797